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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

ADVISORY GROUP DISCUSSES OECD DRAFT PAPER, SOCIETAL ISSUES

USDA'S Agricultural Biotechnology Research Advisory Committee (ABRAC) met in Rosslyn, VA, August 26-27. In his opening remarks, Duane Acker, Assistant Secretary for Science and Education, said biotechnology could have a "tremendous potential impact" on global competitiveness and that "good judgement" is needed now to formulate sound science policy.

James Cook, Research Leader, Agricultural Research Service, Washington State University, Pullman, WA, gave an overview of a draft document on principles for scale-up of crop plant field tests that is being worked on by an OECD (Organization for Economic Cooperation and Development) subcommittee. Some of the environmental safety issues covered in the draft include gene transfer, weediness, phenotypic variability, biological vectors, trait effects, and worker safety. When the document is completed, OECD member nations will be able to use it to formulate their own national policies for conducting safe, large-scale field tests.

Steven Burke, Director of Education and Public Affairs at the North Carolina Biotechnology Center, Research Triangle Park, NC, discussed a proposed background paper on societal issues related to biotechnology. After much discussion, ABRAC voted unanimously to recommend funding a conference on food biotechnology that would include discussion of societal issues. The Committee recommended that the Office of Agricultural Biotechnology (OAB) coordinate such a conference with input from a three-person steering committee drawn from ABRAC membership.

RISK ASSESSMENT GROUP CONVENES

The ABRAC working group on risk assessment met in Rosslyn, VA August 25. Terry Medley, Director of USDA's Biotechnology,

Biologics and Environmental Protection Division (BBEP) at the Animal and Plant Health Inspection Service (APHIS) gave an overview of field trial experiences. He said there has been a shift away from reviews that focused entirely on the source of genetic material to reviews that take into account how plants interact with the environment.

Other presenters discussed the development of performance standards for safe conduct of field tests, the identification of traits that would present special concerns if introduced into various plant species, and the importation of exotic plant viruses. Ann Lichens-Park of the Cooperative State Research Service discussed the need to devote more resources to issues related to risk management, including the more effective collection of field test data.

A BETTER WAY TO TRACK FIELD TESTS

USDA's National Biological Impact Assessment Program is developing a biological monitoring database that will contain full-text documents which provide information about the safety/risk of field testing of genetically modified organisms. The purpose of the system is to inform researchers, regulators, states, special interest groups, and the general public.

The database now contains 179 environmental assessments issued by the BBEP/APHIS. Future entries will include petitions for exemptions, articles from scholarly journals, and conference proceedings.

The database will be distributed in the form of a CD-ROM and will come with special search software which will simplify the retrieval of information relevant to particular topics. The system should be fully operational by early 1993. For more details, call Ann Lichens-Park at 202-401-4491.

CONSUMER INFORMATION DETAILEE JOINS OAB

Marcella M. Hilt, broadcast media liaison in the Office of Public Affairs (OPA), has joined the OAB on a 6-month detail to help implement the Department's new consumer information plan for agricultural biotechnology. The plan is designed to assist USDA agencies and offices in communicating information to the public concerning biotechnology research and regulation. Hilt may be reached on 703-235-4419; Fax: 703-235-4429.

NEWS AROUND THE NATION (AND THE WORLD)

BIOPROCESSING: A MATTER OF URGENCY

Now is the time to begin putting more resources into bioprocessing, according to a new report from the National Academy of Sciences entitled "Putting Biotechnology to Work: Bioprocess Engineering." The Committee on Bioprocess Engineering of the National Research Council met five times from May 1991 to May 1992 to assess the U.S.'s bioprocessing capabilities in the basic life sciences. It found that "much needs to be done and done quickly" to ensure the discoveries of biotechnology are translated into tangible commercial products so that the United States can compete in the global marketplace.

Bioprocess engineering is a subdiscipline of biotechnology that focuses on moving scientific discoveries into practical products, processes, or systems capable of serving the needs of society. The report recommends the U.S. government provide incentives to establish a national program in bioprocess-engineering research, development, education, and technology transfer. It also calls for more bioprocess engineers working across disciplines and construction of efficient and economical manufacturing facilities. To order a copy of the report, please write to the National Academy Press, 2101 Constitution Ave., N.W., Washington, DC 20418.

TECH TRANSFER CONFERENCES IN CANADA AND U.S.

Three technology transfer conferences will take place beginning September 29-30 in Toronto, Ontario, Canada; October 14-15 in Washington, DC; and December 2-3 in Dallas, Texas. They are sponsored by Technology Transfer Conference Inc., a non-profit educational organization, and by the U.S. Environmental Protection Agency and the Department of Energy. About 25 companies are expected to attend. The purpose of the meetings is to inform companies about opportunities to extend their own research and development programs through university laboratories. For details contact Lucy Malone at 615-366-0679; Fax: 615-366-0695.

DON'T UNPACK YET . . . MORE TECH TRANSFER CONFERENCES PLANNED

The huge popularity of 10 National Technology Initiative (NTI) conferences held earlier this year has helped to spawn four more for this Fall. The first will be September 25 in Chicago, IL and it will focus on materials and biotechnology. The second takes place October 15 in Palo Alto, CA with an emphasis on environment and information technology. Next, October 27 in Pittsburgh, PA on

materials and life science. The last takes place December 1 in Baltimore, MD, highlighting transportation and aerospace issues. For general information about the conferences call the National Institute of Standards and Technology at 301-975-2170.

COOKING UP A STORM

A coalition that includes two major biotech trade associations and the group "Chefs in America" will begin a series of regional summit meetings entitled "Genetically Engineered Food Products in the Kitchen." Its purpose is to share information with chefs and food processors about genetically modified foods. The summits will be held in 10 cities starting September 10 in New Orleans. Each meeting will include about six panelists drawn from government, industry, academia, and special interest groups.

Chefs in America is the nation's largest organization of head and executive chefs that includes about 7,000 members. For more details, call Richard Okiuye at 202-234-3330.

BIOTECHNOLOGY, AGRICULTURE, AND VIDEOTAPE

Can't make it to a workshop or symposium? Feeling left out of the information loop? Well fret no longer. Many of those exhilarating moments we've all felt at biotech meetings have been captured on videotape, thanks to a firm called BioConferences in Potomac, MD. The tapes are in VHS format and include mainly Food and Drug Administration workshops and BioEast conferences. At least six cover agricultural biotechnology issues. For details call or send a Fax (same number) to 301-762-2957.

BIOTECH, CHINESE STYLE

This year marked the opening of the Hong Kong Institute of Biotechnology, a non-profit research and development center that combines Chinese expertise in medicinal compounds with Western technological skills. The institute has several projects underway including developing experimental cell lines and making genetically engineered versions of promising compounds. A joint venture with Syntex Corp. in Palo Alto, CA has already produced results in a search for new anti-inflammatory drugs. In another joint venture, researchers at the Shanghai branch of the Institute are extracting medicinal compounds from plants and microorganisms, while the Hong Kong group is busy testing the compounds for their effects on neurotransmitter receptors. Syntex, meanwhile, is studying how the same compounds affect enzyme activity and whole cells. Another

project is aimed at designing bacteria that can break down textile dyes, a major source of water pollution in Hong Kong.

BACK TO BASICS

The Catholic University of America, Washington, DC, is again offering courses this coming winter in biotechnology, including receptor binding techniques and basic and cell tissue culture. For details call 202-319-5276; Fax: 202-319-4467.

PUBLIC CONFIDENCE STILL THE ISSUE

A recent report from the Office of Technology Assessment concerning the impact of new technologies on agriculture states that public concern about food and environmental safety issues may put a crimp in the commercialization of biotech products. The report says "Lack of public acceptance could prevent some technologies from being used even if they are approved by regulatory agencies. To avoid this fate, agricultural biotechnology must meet rigorous scientific standards of safety and efficacy. And, institutions regulating these products must satisfy unprecedented demands for accountability." To order a copy of "A New Technological Era for American Agriculture", write to the Superintendent of Documents, New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954.

IN CASE YOU WEREN'T THERE

■ Daniel Kevles, head of the program in science, ethics, and public policy at the California Institute of Technology, Pasadena, CA, spoke on "Ethical Issues in Genetic Research and Development," July 27, at a meeting of the Congressional Biotechnology Caucus in Washington, DC. He said the range of ethical issues related to biotechnology is "enormous." Kevles said ethical analyses should be based solely on science and conducted on a case-by-case basis. He said such analyses should acknowledge that ethical issues for humans are not the same as those for plants. He also advised against scientists making policy decisions and called for more public debate in general.

NEW PUBLICATIONS

■ *The Genetic Revolution: Scientific Prospects and Public Perceptions*, edited by Bernard D. Davis, Johns Hopkins University Press, 701 West 40th St., Baltimore, MD 21211-2190. 1991

■ *Harnessing Biotechnology for the 21st Century.* Edited by M. Ladisch and A. Bose. Published by the American Chemical Society. August 1992. For more details call 1-800-ACS-5558.

UPCOMING MEETINGS

Sept.-Dec: Biotechnology Training Programs Inc. is sponsoring continuing education courses in molecular biology techniques throughout the Fall. Locations vary. For details call 1-800-821-4861.

Sept. 21-23: ANABIOTECH '92: Fourth International Symposium on Analytical Methods, Systems and Strategies in Biotechnology. Noorwijkerhout, The Netherlands. Call 31-20-6165151; Fax: 31-20-6890981.

Sept. 22: "Fifth Annual Colorado Biotechnology Symposium." Fort Collins, CO. Sponsored by the Colorado Institute for Research in Biotechnology. For details call Vincent G. Murphy at 303-491-1791; Fax: 303-491-7369.

Sept. 23-25: Third Annual International Public Workshop on Genome Mapping of Wheat and Related Species. Meeting to be held in Mexico. Contact Ms. S. Velazquez in Mexico at 5-25-954-2100 Ext. 1382; Fax: 5-25-954-1069.

Sept. 24-25: "The Sixth Forum for Applied Biotechnology." Brugge, Belgium. Organized by the faculty of agricultural sciences of the University of Gent and by the Regional Development Authority of West Flanders. For details write to: Administrative Center FAB, c/o GOM-West-Vlaanderen, Baron Ruzettelaan 33, 8310 Assebroek-Brugge, Belgium.

Oct. 6-9: "Biobased Products Expo '92." St. Louis, MO. Contact the Agricultural Research Institute in Bethesda, MD at 301-530-7122; Fax: 301-571-1837.

Oct. 13: "Conflict Resolution: Ethical Issues for Biotechnology." Washington, DC. Sponsored by the Washington Metropolitan Chapter of the Association of Biotechnology Companies. Call Richard Okiuye at 202-234-3330.

Oct. 19: "New Developments in the Utilization of Genetic Engineering." Gaithersburg, MD. Sponsored by the National Capital Area Tissue Culture Society, Inc. For details call James Saunders at 301-504-7477.

Oct. 19-21: Fifth International Symposium: Biotechnology and Plant Protection. College Park, MD. Co-sponsored by the Maryland Biotechnology Institute, the Maryland Agricultural Experiment Station, USDA, and Monsanto Company. The meeting will emphasize recent research developments in plant viral pathogenesis and disease resistance. Call 301-405-1582 or 301-504-7338.

Nov. 9-11: Plant Genome I. San Diego, CA. Call 212-643-1750; Fax: 212-643-1758.

Nov. 9-11: Recombinant DNA Methodology. Columbia, MD. Contact Exon-Intron at 301-730-3984; Fax: 301-730-3983.

Nov. 10-12: First Asia-Pacific Conference on Plant Physiology. Kuala Lumpur, Malaysia. Call 603-755-5466; Fax: 603-756-6343; Telex: MA 39845.

Nov. 30-Dec. 2: "Potential Ecological and Nontarget Effects of Transgenic Plant Gene Products on Agriculture, Silviculture, and Natural Ecosystems. College Park, MD. This symposium is organized by the Center for Public Issues in Biotechnology of the Maryland Biotechnology Institute. It is co-sponsored by the U.S. Environmental Protection Agency, AgCanada, and the Joyce Foundation. Contact Maury Levin at 301-405-1056 or Ms. Chris Aggour at 301-405-1268; Fax: 301-405-9091.

Dec. 14-16: Workshop on Control of Gene Expression in Yeast. Madrid, Spain. Call 34-1-435-4240; Fax: 34-1-576-3420.

Jan. 17-22: The 1993 Miami Bio/Technology Winter Symposium: Advances in Gene Technology: Protein Engineering and Beyond. Miami, FL. Call 1-800-642-4363; Fax: 305-324-5665.

Jan. 24-27: BIOEAST '93. Washington, DC. Call 301-762-2957.

Biotechnology Notes is written by Marti Asner, public affairs specialist in USDA's Office of Agricultural Biotechnology. Suggestions for future issues are always appreciated and may be sent to USDA/OAB, Room 1001, Rosslyn Plaza East, 14th and Independence Ave., S.W., Washington, DC 20250-2200. Phone: 703-235-4419; Fax: 703-235-4429.

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